PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Docket No: Q76117

KIYOKU, Hiroyuki, et al.

Divisional Application of Appln. No.: 10/261,487

Confirmation No.: Unknown

Prior Group Art Unit: 2822

Filed: June 23, 2003

Prior Examiner: Stephen D. Meier

For:

NITRIDE SEMICONDUCTOR GROWTH METHOD, NITRIDE SEMICONDUCTOR

SUBSTRATE, AND NITRIDE SEMICONDUCTOR DEVICE

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR §§ 1.97 and 1.98

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure under 37 CFR §1.56, Applicants hereby notify the U.S. Patent and Trademark Office of the documents which are listed on the attached Forms PTO-1449 and PTO/SB A & B (modified; four sheets), which are of record in parent Application No. 10/261,487. Applicants are not submitting duplicate copies of these references but request that they be listed on the face of any patent granted on the above application. (See 37 CFR §1.98(d)).

The submission of the listed documents is not intended as an admission that any such document constitutes prior art against the claims of the present application. Applicants do not

INFORMATION DISCLOSURE STATEMENT Divisional Application No. 10/261,487

waive any right to take any action that would be appropriate to antedate or otherwise remove any listed document as a competent reference against the claims of the present application.

Respectfully submitted,

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WASHINGTON OFFICE

PATENT TRADEMARK OFFICE

Date: June 23, 2003

Atty. Docket No. Serial No.: Form PTO-1449 **U.S.** Department of Commerce (Rev. 2-32) Patent & Trademark Office Q76117 Confirmation No.: To be Assigned INFORMATION DISCLOSURE STATEMENT Applicant: Hiroyuki KIYOKU, et al. (Use several sheets if necessary) Filing Date: 06/23/03 Prior Art Group: 2822 U.S. PATENT DOCUMENTS Examiner Document Number Date Name Class Sub-Filing Date Initial Class (if appropriate) 4,482,422 11/13/1984 McGinn et al. 117 95 4,578,142 03/25/1986 Corboy et al. 117 89 4,908,074 03/13/1990 Hosoi et al. 148 33.2 08/24/1993 257 76 5,239,188 Takeuchi et al. 09/21/1993 5,247,533 Okazaki et al. 372 45 03/01/1994 Nakamura et al. 438 509 5,290,393 438 5.364.815 11/15/1994 Osada 489 5,679,152 10/21/1997 Tischler et al. 117 97 117 96 5,709,745 01/20/1998 Larkin et al. 372 43 5,727,008 03/10/1998 Koga et al. 5,764,673 06/09/1998 Kawazu et al. 372 45 5,766,695 06/16/1998 Nguyen et al. 427 553 5,773,369 06/30/1998 Hu et al. 438 746 5,789,265 08/04/1998 Nitta et al. 438 22 257 03/09/1999 Marx et al. 94 5,880,485 6,051,849 04/18/2000 Davis et al. 257 103 02/27/1998 104 2001/0007242 A1 07/12/2001 Davis et al. 117 148 33 2001/0009167 A1 07/26/2001 Davis et al. FOREIGN PATENT DOCUMENTS Translation Class Sub-Document Date Country Yes/No class 10/20/1999 H01L 33/00 7-273367 A **JAPAN** 12/24/1993 **JAPAN** H01L 33/00 5-343741 A 5-55631 A 03/05/1993 JAPAN H01L 33/00 03/08/1996 8-64791 A **JAPAN** H01L 27/12 JAPAN 7-201745 A 08/04/1995 H01L 021/205 03/27/1997 PCT H01S 3/18 Yes-EP 0 852 416 A1 WO 97/11518 0 852 416 A1 07/08/1998 EP H01S 3/18 WO 99/44224 09/02/1999 PCT H01L 21/20 OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) International Search Report, PCT/US98/01640, July 14, 1998 Defendant Nichia America Corporation's Motion for Partial Summary Judgment, North Carolina State University and Cree, Inc., v. Nichia Corporation and Nichia America Corporation, No: 5:00-CV-703-F(2), U.S. District Court for the Eastern District of North Carolina Southern Division, Dec. 11, 2000 International Search Report, PCT/US99/04346, June 9, 1999 Lester et al, "High Dislocation Densities in High Efficiency GaN-Based Light-Emitting Diodes", Appl. Phys. Lett., 66, 1995, pp. 1249-1251 Nakamura, Shuji and Gerhard Fasol, The Blue Laser Diode: GaN Based Light Emitters and Lasers, Berlin: Springer, 1997, pp. 282-304 **EXAMINER: DATE CONSIDERED: EXAMINER:** Initial if citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

Atty. Docket No. Serial No.: Form PTO-1449 U.S. Department of Commerce (Rev. 2-32) Patent & Trademark Office 076117 Confirmation No.: To be Assigned Applicant: Hiroyuki KIYOKU, et al. INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary) Filing Date: 06/23/03 Prior Art Group: 2822 **U.S. PATENT DOCUMENTS** Examiner Document Number Date Name Class Sub-Filing Date Initial Class (if appropriate) RE 34,861 02/14/1995 Davis et al. 86 117 Palmour et al. 4,946,547 08/07/1990 117 97 4,912,064 03/27/1990 Kong et al. 438 507 4,865,685 09/12/1989 Palmour 438 718 06/11/1985 4,522,661 Morrison et al. 148 33.2 09/29/1998 372 5,815,520 Furushima 45 07/28/1998 257 5,786,606 Nishio et al. 103 5,760,426 06/02/1998 Marx et al. 257 190 08/27/1996 5,549,747 Bozler et al. 117 43 5,397,736 03/14/1995 Bauser et al. 56 117 5,389,571 02/14/1995 Takeuchi et al. 117 89 5,122,845 257 06/16/1992 Manabe et al. 76 4,876,210 10/24/1989 Barnett et al. 117 58 4,651,407 03/24/1987 Bencuya 438 193 5,877,070 03/02/1999 Goesele et al. 438 458 5,710,057 01/20/1998 Kenney 438 406 4,127,792 500 11/28/1978 Nakata 313 FOREIGN PATENT DOCUMENTS Document Date Country Class Sub-Translation class Yes/No 0 551 721 A2 07/21/1993 EP H01L 21/20 OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) Zheleva et al., Dislocation Density Reduction Via Lateral Epitaxy in Selectively Grown GaN Structures, Appl. Phys, Lett. Vol. 71, No. 17, October 27, 1997, pp. 2472-2474 Doverspike et al., The Effect of GaN and AIN Buffer Layers on GaN Film Properties Grown on Both C-Plane and A-Plane Sapphire, Journal of Electronic Materials, Vol. 24, No. 4, 1995, pp. 269-273 Kuznia et al., Influence of Buffer Layers on the Deposition of High Quality Single Crystal Gan Over Sapphire Substrates, J. Appl. Phys., Vol. 73, No. 9, May 1, 1993, pp. 4700-4702 Watanabe et al., The Growth of Single Crystalline GaN on a Si Substrate Using AIN As An Intermediate Layer, Journal of Crystal Growth, Vol. 128, 1993, pp. 391-396 Chen et al., Silicon-on-Insulator: Why, How, and When, AIP Conference Proceedings, Vol. 167, No. 1, September 15, 1988, pp. 310-319 Amano et al., Metalorganic Vapor Phase Epitaxial Growth of a High Quality GaN Film Using an AIN Buffer Layer, Applied Physics Letters, Vol. 48, No. 5, February 3, 1986, pp. 353-355 Yoshida et al., Improvements on the Electrical and Luminescent Properties of Reactive Molecular Beam Epitaxially Grown GaN Films by Using AIN-Coated Sapphire Substrates, Applied Physics Letters, Vol. 42, No. 5, March 1, 1983, pp. 427-429 Nakamura, GaN Growth Using GaN Buffer Layer, Japanese Journal of Applied Physics, Vol. 30, No. 10A, October 1991, pp. L1705-L1707 **EXAMINER: DATE CONSIDERED: EXAMINER:** Initial if citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

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		DISCLOSURE		Confirmation Number	Unknown
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		· .		Prior Examiner Name	Stephen D. Meier
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